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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/762,609	01/22/2004	Joseph Szwarc	P05871 US01	5042
22885	7590	10/04/2004	EXAMINER	
MCKEE, VOORHEES & SEASE, P.L.C. 801 GRAND AVENUE SUITE 3200 DES MOINES, IA 50309-2721			EASTHOM, KARL D	
			ART UNIT	PAPER NUMBER
			2832	

DATE MAILED: 10/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/762,609

Applicant(s)

SZWARC ET AL.

Examiner

Karl D Easthom

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 August 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>1/22/4</u> . | 6) <input type="checkbox"/> Other: _____ |

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1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The term "about" in claim 1 is a relative term which renders the claim indefinite. The term "about" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. Further, when as in this case, the claims are close to the prior art, where "about" is a relative term, MPEP 2173.05 (b) states "wherein the improvement over the prior art rests entirely upon size or weight of an element in a combination of elements, the adequacy of the disclosure of a standard is of greater criticality", and it has been held that such terms of degree must be more clearly defined. See MPEP 2173.05(b), citing Amgen, Inc. v. Chugai Pharmaceutical Co., 927 F.2d 1200, 18 USPQ2d 1016 (Fed.Cir. 1991). It is simply not clear where applicant's claimed invention is distinct over the prior art as noted above. Further, it is not clear how the selections that create a reduction of resistance change due to power create a product that is distinct from the prior art or define over the prior art, since a "reduction" lacks a comparative standard. That is, or for example, with any prior art device, one could imagine an increase so that the product is a reduction as to that increased imagined product.

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-9, and 11-13 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Zandman '413. Under the 102 alternative, Zandman discloses the claimed invention at Figs. 5-6, where the substrate is alumina having the claimed thickness at col. 5, lines 40-45 (4-40mils), the resistive film TCR is zero at one point at Fig. 2 or at Fig. 5, (and thus about 1 at some lower temperatures at least), the thickness is in the claimed range of 30-300 micro inches at col. 5, lines 1-10 (.03-3 mils) cemented by 4 to the substrate, and all selected to produce a reduction of resistance change at the bottom of col. 1, for example. Note that at Fig. 6, the overall TCR is close to zero or "about 0.1" for example where "about" is a broad term, and see col. 4, lines 40-45. For claims 2-6, all the parameters are altered to reduce the resistance as noted at col. 1. For example, for claims 2-3, substrates and foils are selected at the top of col. 5, while the foil thickness is selected as noted above. For claim 6, the resistor or a resistor is etched and selected to reduce the TCR as noted at col. 6, lines 1-50. The pattern will reduce bending as compared to a case where the TCR of the resistors are not selected, where bending is reduced at col. 5, lines 45-65. In claims 7-9, cement is chosen at col. 5, lines 44-47, while the thickness is "selected" since there is some thickness in the end. That is, how certain parameters are selected are not germane to the product claim where in the end all claimed elements are present. Note that applicant employs alumina in his specification,

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and that appears to be the only substrate material disclosed, so that it inherently has the claimed modulus of elasticity. Also it is "about" the claimed modulus, where the term is broad and undefined. In claim 11, the TCR can be determined over any range, and no structure results from the determination. Under the 103 alternative, where alumina lacks the claimed modulus, or where for example certain aspects are not chosen as claimed such as the thickness, or cement type, and such a mental step for a product claim is required, it would have been obvious to select such a modulus, or other parameter, to reduce the TCR where col. 5, lines 5-30 discloses choosing a substrate to minimize the TCR and where a compensating substrate is chosen based upon its thickness, modulus of elasticity and coefficient of thermal expansion, see col. 5, lines 45-79. Note too, with any prior art device such as that of Zandman, one could imagine an increase such as by choosing another material, so that the product of Zandman is a reduction as to that imagined product. Similar remarks apply to claim 12, since the process steps create no distinct product, and see col. 9 specifically disclosing offsetting strain (stress) as claimed. In claim 13, the device is capable of operating hotter than ambient since resistors create heat,

4. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Zandman et al. '413 in view of Witt et al. Zandman discloses, as noted above, the claimed invention as noted above except for foils on both sides of the substrate. Witt discloses resistors on both sides of the substrate in order to minimize bending so as to handle more power. Zandmann discloses putting structures on the opposite side of the substrate in order to minimize bending in order to handle power also, see col. 2, lines 2-20, col. 5, lines 46-67, so that placing another equal resistor type on the other side would have been obvious.

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5. Applicant's arguments filed 8/12/4 have been fully considered but they are not persuasive. Applicant states that the cases cited concerning "about" are not valid for reasons because the prior art does not disclose reduction by a cumulative effect. This is not correct for the cumulative effect is disclosed as noted above, and further, it is not seen how such an effect creates a distinct product. Applicant has the burden in this product by process claim of producing evidence that clearly points to structural differences in the claim and no such difference is evidenced. The statement that the graph does not disclose TCR but it could be calculated is taken as correct. That there is no scale for the TCR is not material where as noted above, Fig. 6 discloses it as zero at the axis, and col. 3, as "very low", otherwise meeting the claim. The term low or very low as it relates to TCR is known to be about zero, or less than 1ppm, as evidenced by applicant's claim, and also as is well known, the Examiner taking Official Notice thereto.

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karl D Easthom whose telephone number is (571) 272-1989.

The examiner can normally be reached on M-Th, 5:30AM-4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Elvin Enad can be reached on (571) 272-1990. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Karl D Easthom
Primary Examiner
Art Unit 2832

KDE